Evening Travel Times With and Without the I-20 East CD Lane Project

The travel time analysis provided in the table below summarizes the evening (p.m. peak hour) travel times between various locations within the study area in the No-Build and Build conditions. The various locations within the project area (A through F) are listed and described in the box below and are shown in the accompanying map. These locations represent the most highly traveled origin or destination locations within the project area. The distances (in miles) between each of these locations are presented in the small table below the locations list.

ORIGIN/DESTINATION LOCATIONS:

A: I-20 Eastbound Mainline, West of Columbia Dr.

B: I-285 Southbound Mainline

C: I-285 Northbound Mainline

D: Wesley Chapel Rd. Eastbound Off-Ramp

E: Panola Rd. Eastbound Off-Ramp

F: I-20 Eastbound Mainline, East of Panola Rd.

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Travel Distances (Miles)							
Erom	То						
From	D	E	F				
Α	3	6.3	7.2				
В	3	6.1	7				
С	3	5.6	6.5				

As shown in the table below, considerable improvements in travel times are anticipated with the Build alternative. The Build alternative would greatly improve travel times (a 33 percent to 76 percent reduction in times) along I-20 Eastbound within the project area in the evening peak hour.

For example, under No-Build
conditions, it would take 13
minutes to travel from the I-285
southbound ramp to the Wesley
Chapel Road eastbound off-ramp
during the p.m. peak hour in
2023, as compared to only 4
minutes of travel time under the
2023 p.m. peak hour in the Build
condition. This amounts to 9
minutes of time savings, or a 70
percent reduction in travel time.

Year	From	Travel Time No-Build Conditions (min/veh)		Travel Time Build Conditions (min/veh) To			Travel Time Savings (min/veh) To			Percent Improvement To			
		То											
		D	E	F	D	E	F	D	Ε	F	D	Е	F
Open Year (2012)	Α	14.3	17.4	18.3	3.7	6.6	7.6	10.7	10.8	10.7	74%	62%	59%
	В	8.0	11.1	12.0	3.6	6.8	7.7	4.4	4.3	4.3	55%	39%	36%
	С	9.0	12.1	13.0	2.9	6.1	7.0	6.1	6.0	5.9	67%	50%	46%
	Α	16.3	19.4	20.3	4.3	9.5	10.6	11.9	9.9	9.7	73%	51%	48%
Intermediate	В	12.9	16.0	16.9	3.9	9.4	10.4	9.0	6.7	6.6	70%	42%	39%
Year (2023)	С	13.3	16.5	17.4	3.2	8.7	9.7	10.1	7.8	7.7	76%	47%	44%
Design Year (2032)	Α	16.3	19.4	20.4	5.0	10.5	11.5	11.3	9.0	8.8	70%	46%	43%
	В	16.7	19.9	20.8	5.2	11.5	12.6	11.6	8.4	8.2	69%	42%	39%
	С	14.1	17.3	18.2	4.6	11.0	12.1	9.4	6.2	6.1	67%	36%	33%

Open Year – When the project is open to traffic; Intermediate Year – 10 years from the open year; Design Year – 20 years from the open year

Average Evening Vehicular Speeds With and Without the I-20 East CD Lane Project

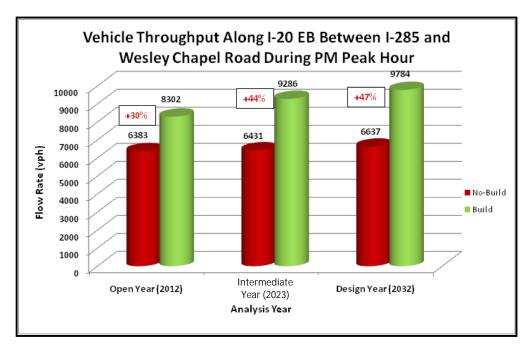
The following presents the average vehicle speeds on the I-20 Eastbound mainline, I-285 ramps, the proposed CD system (under the Build alternative), and the entire system in the evening peak period under No-Build and Build conditions.

Analysis	Facility Type	PM Peak Average Speeds (mph)						
Period	Facility Type	No-Build	Build	Difference	% Improvement			
	I-20 Eastbound Mainline	39	58	19	48%			
Open Year (2012)	I-285 Ramps	26	46	20	79%			
	I-20 CD System	NA	54	NA	NA			
	System-Wide	36	55	19	53%			
Latanasadiata	I-20 Eastbound Mainline	37	46	10	27%			
Intermediate Year	I-285 Ramps	11	39	28	245%			
(2023)	I-20 CD System	NA	48	NA	NA			
(2023)	System-Wide	31	45	14	45%			
	I-20 Eastbound Mainline	36	44	7	20%			
Design Year (2032)	I-285 Ramps	7	24	17	241%			
	I-20 CD System	NA	34	NA	NA			
	System-Wide	30	39	9	29%			

- Operating speeds under Build conditions would be substantially higher (at least 20 percent) than those under No-Build conditions for all years.
- For example, in the open year, vehicle speeds on the I-20 mainline would improve from 39 mph (No-Build condition) to 58 mph with the project, representing a 48% improvement in speed. By the design year, speeds on the I-20 mainline would improve from 36 mph (No-Build condition) to 44 mph, a 20% improvement.

NA = Not applicable

Vehicle Throughput With and Without the I-20 East CD Lane Project



- Vehicle throughput on a freeway is the number of vehicles that can get through over a short period of time, such as an hour. Under No-Build conditions, the freeway weave reduces the capacity of the I-20 eastbound mainline, and as a result, long queues form and extend westward on the I-20 eastbound mainline and I-285 ramps. The direct effect of these conditions is reflected in a significant reduction in vehicle throughput along I-20 eastbound through the study area, significantly high delays, and frequent stop-and-go conditions.
- As the traffic demand increases from the open year to the design year, these conditions on the I-20 mainline will continue worsen, with more and more vehicles waiting in the queue and unable to enter the project area. This would also spread the p.m. peak period from its current 3 hours to 4-5 hours.
- By eliminating weaving traffic from the I-20 mainline, the proposed CD system would open up freeway capacity that was not fully utilized under No-Build conditions. This would allow more vehicles to access the system and help increase the vehicle throughput of the corridor. As shown in the chart, the proposed project would increase the throughput of this segment of I-20 East by 30% in the open year, 44% in the intermediate year, and 47% in the design year.